

REMARKS

Applicant thanks the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of a certified copy of the priority document submitted June 5, 2001.

Status of the Application

Claims 1-12 are all the claims pending in the Application, as claims 11 and 12 have been added to more fully define the invention. Claims 1-10 have been rejected.

Claim Rejections

The Examiner has rejected claims 1-5 under 35 U.S.C. § 102(b) as being anticipated by Miyanaga et al. (US 5,223,074; hereinafter "Miyanaga"), and claims 6-10 under 35 U.S.C. § 103(a) as being unpatentable over Miyanaga. This rejection is respectfully traversed.

In the instant Application, the radial enlargement of the segments (bead lock members) is attained by two-stage movement of the inner piston. Specifically, the inner piston is: (1) axially pushed by the axial movement of the outer piston at a first stage; and (2) further moved by feeding high-pressure gas to the back face of the inner piston at a second stage (after the movement of the outer piston is stopped by the stopper). Thus, the outer piston acts to axially move the inner piston but does not directly contribute to the enlargement of the segment, *i.e.*, only the inner piston serves to enlarge the segment.

In contrast, the operation of Miyanaga's pistons 10 and 11 is entirely different from those of the instant Application. First piston 10 is pushed a given distance by the second piston 11, and is then moved to a position contacting partition wall 12 and flange wall 16 by feeding compressed air to the back face of piston 10. Thus, after elastic ring 8 is moved radially outward by only second piston 11, segment 6 is moved radially outward by first piston 10. The

combination of the elastic ring 8 and the segment 6 is considered to correspond to the segment defined in the present invention as the bead lock member. Therefore, both the pistons act to move the bead lock member, which is entirely different from the action of the pistons according to the present invention.

Further, even assuming for the sake of argument that first piston 10 could be the claimed inner piston and that second piston 11 could be the claimed outer piston (as stated by the Examiner), the disclosed construction still fails to teach or suggest all of the features of claim 1. Specifically, although partition wall 12 and flange wall 16 serve as a stopper for the inner piston (first piston 10), only flange wall 16 serves as a stopper for the outer piston (second piston 11). Therefore, the flange wall 16 is entirely different from the stopper as defined in the present invention.

Thus, Applicant respectfully requests that the Examiner withdraw these rejections.

New Claims

Claims 11 and 12 have been added to more fully define the invention, and are supported at least by FIG. 1 of the Application. Applicant respectfully submits that these claims are patentable over the applied reference, for *at least* the reasons discussed below.

Claim 11 recites that the “stopper is positioned at least partially between said inner piston and said outer piston.” In contrast, mount flange 16 (the portion of Miyanaaga alleged by the Examiner to be equivalent to the claimed “stopper”) is not provided between any portions of pistons 10 and 11.

Claim 12 recites that “a substantial portion of said inner piston is positioned between a surface of said outer piston closest to said segments, and said segments.” In contrast, no portion

of Miyanaga's piston 10 (alleged by the Examiner to be the "inner piston") is provided between a surface of piston 11 (alleged by the Examiner to be the "outer piston") closest to segments 6, and segments 6 themselves.

Conclusion

In view of the foregoing, it is respectfully submitted that claims 1-12 are allowable. Thus, it is respectfully submitted that the application now is in condition for allowance with all of the claims 1-12.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Please charge any fees which may be required to maintain the pendency of this application, except for the Issue Fee, to our Deposit Account No. 19-4880.

Respectfully submitted,



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APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended) A tire building apparatus comprising a group of many segments [enlarging a size] adapted to be enlarged in [a] the radial direction to pushingly lock a bead portion of a green tire, a ring-shaped inner piston engaging with the segments of such a group and moving inward in a direction of an axial line to enlarge the size of each of the segments, a ring-shaped outer piston contacting and engaging with a back face of the inner piston to move the inner piston inward in the direction of the axial line, a cylinder slidably housing the inner piston and the outer piston in its double wall, a pair of pressure acting means moving each of the inner piston and outer piston housed in the double wall inward or outward in the direction of the axial line, and a stopper formed in the cylinder for stopping the inward movement of the outer piston at a given position before the completion of the inward movement of the inner piston.

3. (Amended) A tire building apparatus according to claim 1, wherein the group of the segments has a tensile elastic means stretching in the radial direction in the enlargement of the size of the segment and is provided on inner end portion in the radial direction with a wheel rotatably contacting with [the] a slant face of the inner piston.

5. (Amended) A tire building apparatus according to claim 1, wherein the group of the segments has a push-locking face at a first size-enlarging stage [having] adapted to have a

clearance of 0.5-1.0 mm to an inner face of the bead portion of the green tire and a push-locking face at a second size-enlarging stage pushingly locking the bead portion of the green tire.

8. (Amended) A tire building apparatus according to claim [6] 7, wherein the pressurized gas supplying device for supplying two kinds of high-pressure and low-pressure gases in the gas pressure acting means comprises a first check valve, a pipe connecting a gas inlet port of the check valve to the gas space and a pipe connecting a gas outlet port of the check valve to the gas path, and the first check valve has a cracking pressure exceeding a pressure of a low-pressure gas but being less than a pressure of a high-pressure gas.

9. (Amended) A tire building apparatus according to claim [6] 7, wherein a gas pressure acting means comprises a vacuum means and a change-over valve switching connection to the vacuum means and connection to the gas space in the pressurized gas supplying device, and the gas space is communicated with the pressurized gas supplying device and the vacuum means through the change-over valve.

Claims 11 and 12 are added.